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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,291	06/27/2003	Thomas Patrick Jackson	491442001600	7894

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EXAMINER
KIM, HAROLD J

ART UNIT	PAPER NUMBER
2182	

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		10/609,291	JACKSON ET AL.
		Examiner	Art Unit
		Harold Kim	2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2004*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-29 are presented for examination.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3.   Claims 1-29 are rejected under 35 U.S.C. 102(a) as being anticipated by Richter et al., US Publication no. US 2003/0046396 A1.

4.   In re claim 1, Richter et al. shows a system [fig 6] for executing write and read data commands [request for content, paragraph 0214; fig 5, 105], the system having a buffer pool [buffer pool, paragraph 0021] of blocks for temporarily storing write data to be sent to a peer device and read data received from the peer device, an apparatus for managing read and write data congestion in the buffer pool [fig 5], the apparatus comprising:

        a processor [320, fig 6] programmed for preventing an initiation of a new read or write data command [135, 165, fig 5] until pending read and write data commands have been processed [paragraph 0217, lines 4-7] enough to free up sufficient blocks in the buffer pool to accommodate the data of the new read or write data command [paragraph 0218, last 6 lines; 135, 140 in fig 5].

5.   In re claim 2, Richter et al. shows determining a number of blocks that will be required to store the read or write data for the new read or write data command [paragraph 0216, last 3 lines; 115 in fig 5];

determining a number of free blocks in the buffer pool [120, 125 in fig 5]; and

throttling the new read or mite data command if the number of free blocks is

insufficient to store the read or write data for the new read or write data command [135,

150, 165 in fig 5].

6.   In re claim 3, Richter et al. shows a receive list memory which contains descriptor

pointers to free blocks [120, fig 5], and a free list memory which contains descriptor

pointers to free blocks not referenced in the receive list memory [120, fig 5], and

determining the number of free blocks in the buffer pool by summing the number of free

blocks in the receive list memory and the free list memory [125, fig 5].

7.   In re claim 4, Richter et al. shows initiating the new read or write data command if

the number of free blocks is sufficient to store the read or write data for the new read or

write data command [135, 140, 145 in fig 5].

8.   In re claim 5, Richter et al. shows a receive list memory which contains descriptor

pointers to free blocks and blocks filled with read data [120, fig 5], and a free list

memory which contains descriptor pointers to free blocks not referenced in the receive

list memory, the processor further programmed for determining the number of free

blocks in the buffer pool by:

summing the number of free blocks in the receive list memory and the free list

memory [125, fig 5]; and

adding the sum to a number of blocks estimated for storing incoming read data

for any pending read data commands [required resources will be available to process,

paragraph 0217].

9.   In re claim 6, Richter et al. shows the processor further programmed for executing the new read or write data command if the number of free blocks is sufficient to store the read or write data for the new read or write data command [135, 140, 145 in fig 5].

10.   In re claim 7, Richter et al. shows storing the throttled new read or write data command and any subsequent new read or write data commands into a first-in-first-out (FIFO) read/write command request queue [165, fig 5];

        processing pending read data commands to completion to free up blocks in the buffer pool [115, 120, 135 in fig 5]; and

        executing a next read or write data command from the read/write command request queue if the number of free blocks becomes sufficient to store the read or write data for the next read or write data command [145, fig 5].

11.   In re claim 8, Richter et al. shows upper layer protocols [paragraph 0108].

12.   In re claim 9, Richter et al. shows an iSCSI controller circuit [paragraph 0117].

13.   In re claim 10, Richter et al. shows a host computer [fig 1A].

14.   In re claim 11, Richter et al. shows a storage area network (SAN) wherein an iSCSI network is coupled to the iSCSI controller circuit and one or more storage devices are coupled to the iSCSI network [paragraphs 0198, 0194, 1117].

15.   Claims 12-22 are rejected under the same rationale as discussed above in claims 1-11.

16.　　In re claims 23-29, Richter et al. teaches the apparatus to carry out the operations as set forth in claims 1-11. Therefore, Richter also teaches the method steps in using the apparatus.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

Any response to this action should be mailed to:

> Mail Stop ____
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The centralized fax number is 703 872-9306.

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Any inquiry of a general nature or relating to the status of this application should be directed to the central telephone number (571) 272-2100.

Direct any inquiries concerning drawing review to the Drawing Review Branch
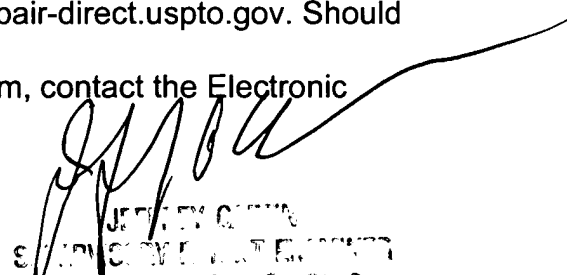(703) 305-8404.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Harold Kim whose telephone number is 571-272-4148.
The examiner can normally be reached on Monday-Thursday 6AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for
the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the
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Harold J. Kim
Patent Examiner
February 7, 2005/HK